PicAI

PicAI - AI-driven Probe Inspection Control

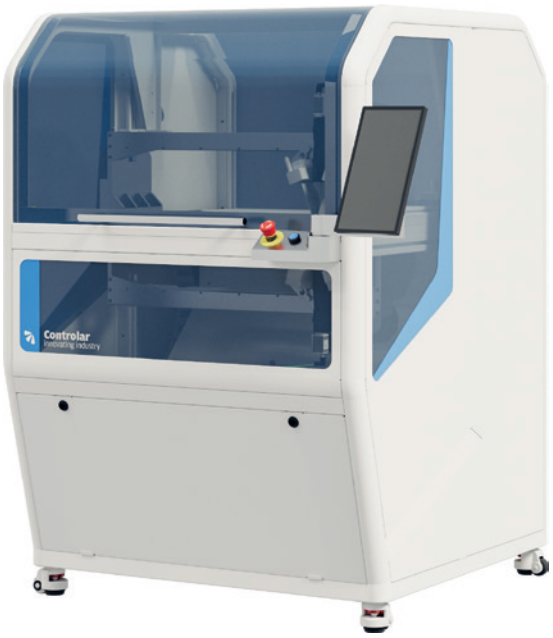
AI-driven inspection of probe marks across the entire PCB, regardless of size, color, or material.

Transforms manual inspection into a fast, repeatable, data-driven process, reducing probe inspection from hours to minutes.

High-precision detection of misalignment, poor contact, and early probe wear.

Full coverage with single- or dual-sided inspection in one pass.

Flexible deployment from lab to full production environments.



PRODUCT DESCRIPTION

PicAI - AI-driven Probe Inspection Control is the world's first fully automated inspection system designed to eliminate manual ICT fixture verification.

With patent-pending technology, PicAI combines a single- or dual-sided vision module with adaptive Artificial Intelligence (AI) to analyze the probe marks left by test pints contacting PCBs during PCB testing, verifying fixture conformity – in ICT, FCT, and other PCB test types – with speed and precision.

The system captures the entire PCB in a single sweep, detecting punctures at each Test Point (TP) and measuring deviations from the TP center with extreme accuracy.

All inspection data is then transformed into intelligent reports, including statistical analysis, full traceability, and trend monitoring, enabling faster and assertive decision-making.

KEY FEATURES

- **Dual-Sided Inspection (industrial version)**
  Simultaneous top and bottom PCB inspection with synchronized camera and lighting modules.
- **Adaptive Computer Vision**
  AI-driven recognition automatically adjusts inspection parameters, reducing false detections and adapting to different PCB sizes, colors, or materials.
- **High Precision**
  Detects subtle probe misalignments, poor contacts, or early wear that would be invisible during manual inspections.

CONFIGURATION

PicAI is available as:

- A fully automated industrial system designed for production environments and in-line integration.
- A compact benchtop standalone version for R&D, validation, lab environments and low-volume applications.
- A service model, with Controlar performing inspection and fixture verification.

MAIN APPLICATIONS

PicAI's versatility allows for a range of applications within the electronics manufacturing lifecycle.

On the production floor, it serves as a critical quality gate, ensuring that ICT fixtures are perfectly aligned to the PCBs, detecting defects before they cause costly reworks.
In R&D and design, the system offers precise data on fixture performance, accelerating PCB developments and preventing future failures.
Ultimately, it delivers objective, repeatable inspection data and reports to quality control teams, ensuring consistent quality and compliance across all production batches.

TECH SPECS

Dimensions (in mm)
1050 (w) x 1150 (l) x 1600 (h) mm

Power
/ Voltage: 230 V
/ Frequency: 50Hz
/ Current: 25 A

Hardware
Compact, all-in-one unit built with a rugged, industrial grade materials.

Optical System
Integrated system with high-resolution linear cameras and synchronized lighting modules. The industrial version supports simultaneous top and bottom PCB inspection, while the benchtop version is configured for top-side inspection.

Software
PC-based software with a user-friendly interface and AI-driven analysis for detailed reporting and traceability.

Adaptive Computer Vision
AI-driven recognition that automatically adjusts inspection parameters to minimize false detections.

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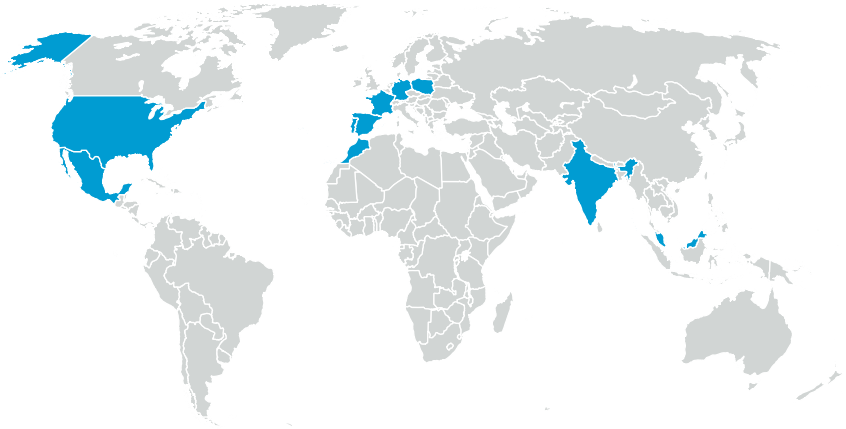

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